THE CLAIMS

1. An inkjet print engine assembly, comprising:

an inkjet printhead assembly, comprising:

(a) an ink distribution assembly that is in fluid communication with an ink supply;

(b) at least one printhead that is mounted on the ink distribution assembly, the, or each, printhead having at least one printhead chip that incorporates a plurality of micro-electromechanical nozzles; and

(c) at least one nozzle guard, wherein each of the at least one nozzle guards defines a plurality of micro-apertures, each of the at least one nozzle guards being mounted adjacent one or more of the at least one printhead chips such that each micro-aperture is in fluid communication with a corresponding nozzle so that ink ejected from the nozzles passes through the respective corresponding micro-apertures;

a rotary platen assembly that is mounted for rotation about an axis, the rotary platen assembly comprising:

(d) an axially extending platen surface; and

(e) an axially extending capping arrangement, the capping arrangement being disposed on the platen assembly at a position circumferentially spaced from the platen surface; and

a drive mechanism configured to rotate the platen assembly about its axis, thereby enabling the platen surface and the capping arrangement to selectively be moved into operative engagement with the printhead assembly, the capping arrangement including a sealing structure that is shaped and dimensioned to engage the printhead assembly in a region about the, or each, printhead, so that the, or each, printhead is sealed from the environment when the capping arrangement is in said operative condition, without the sealing structure being in contact with the micro-apertures when the capping arrangement is in the operative position.

2. An inkjet print engine assembly according to claim 1, the sealing arrangement being configured to engage a surface of the at least one nozzle guard.

3. An inkjet print engine assembly according to claim 1, wherein the capping arrangement includes an axially-extending absorbent member for absorbing ink from the micro-apertures or a surface of the at least one nozzle guard adjacent the micro-apertures.

4. An inkjet print engine assembly according to claim 3, wherein the absorbent member is a sponge.

5. An inkjet print engine assembly according to claim 1, further including a linear displacement assembly configured to permit displacement of the platen assembly relative to the printhead assembly, the displacement mechanism and the platen assembly being configured such that, when the drive mechanism rotates the capping arrangement towards an operative position thereof, the linear displacement assembly operates to displace the platen assembly, and thereby the capping arrangement, towards the printhead assembly, such that the capping arrangement engages the printhead assembly.

6. An inkjet print engine assembly according to claim 5, wherein the linear displacement assembly includes a cam mounted for rotation with the platen assembly and a cam follower positioned to cause, in conjunction with the cam, relative movement between the platen assembly and the inkjet printhead assembly.

7. An inkjet print engine assembly according to claim 6, wherein the linear displacement assembly further includes a guide, the platen assembly being mounted relative to the guide such that the platen assembly is constrained to linear movement towards and away from the printhead assembly.

8. An inkjet print engine assembly according to claim 1, wherein the platen assembly further includes an axially extending ink blotter circumferentially spaced from the platen surface and the capping assembly, the ink blotter being configured to perform a blotting operation on the printhead assembly as the platen assembly is rotated by the drive means.

9. An inkjet print engine assembly according to claim 1, further including air supply means for providing positive air pressure to a space between the nozzle guard and the nozzles during printing.

10. An inkjet print engine according to claim 9, wherein each of the print modules has a corresponding one of the nozzle guards, and wherein each of the print modules and nozzle guards defines its own one of the spaces that is separate from the spaces defined by other pairs of nozzle guards and print modules.

11. An inkjet print engine according to claim 10, wherein the air supply means supplies positive air pressure to each of the spaces.

12. An inkjet print engine according to claim 1, wherein said plurality of nozzles are arranged in an array extending across an A4 pagewidth.

13. An inkjet print engine according to claim 9, wherein, when the capping mechanism is in use to seal the printhead, a sealing mechanism in fluid communication with the air supply means is operable to prevent ingress of external air to the nozzles.